

DECLARATION AND POWER OF ATTORNEY

We, the below named inventors, hereby declare that:

Our residences, post office addresses, and citizenships are as stated below next to our respective names.

We believe we are the original, first, and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled **HIGH OMNIDIRECTIONAL REFLECTOR**, the specification of which was filed with the United States Patent and Trademark Office on February 19, 1999, as Serial No. 09/253,379. This application claims priority under 35 USC §119(e) from United States Provisional Patent Application Serial No. 60/075,223, filed February 19, 1998.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims.

We acknowledge the duty to disclose information which is material to patentability in accordance with Title 37, Code of Federal Regulations, Section 1.56.

We hereby declare that all statements are made hereby of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And we hereby appoint:

Maurice E. Gauthier - Reg. No. 20,798
I. Stephen Samuels - Reg. No. 20,919
Richard L. Stevens - Reg. No. 24,445
Matthew E. Connors - Reg. No. 33,298
Arlene J. Powers - Reg. No. 35,985
William E. Hilton - Reg. No. 35,192
Patrick J. O'Shea - Reg. No. 35,305

all of the firm of Samuels, Gauthier & Stevens, our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

We request that all correspondence be directed to:

Samuels, Gauthier & Stevens, LLP
225 Franklin Street, Suite 3300
Boston, Massachusetts 02110

Attn: Matthew E. Connors, Esq.

John D. Joannopoulos
(Full Name of Inventor)

5 May 99
(Date)

U. S. A.
(Citizenship)

Shanhui Fan
(Full Name of Inventor)

5 May 99
(Date)

P. R. China
(Citizenship)

Joshua N. Winn
(Full Name of Inventor)

5 May 1999
(Date)

U. S. A.
(Citizenship)


(Inventor's Signature)


64 Douglas Road
Belmont, MA 02178
(Residence)

Same as Residence
(Post Office Address)


(Inventor's Signature)

50 Porter Street
Somerville, MA 02143
(Residence)

Same as Residence
(Post Office Address)


(Inventor's Signature)

16 Josephine Avenue #2
Somerville, MA 02144
(Residence)

Same as Residence
(Post Office Address)

Yoel Fink
(Full Name of Inventor)

Yoel Fink
(Inventor's Signature)

5/5/99
(Date)

50 Wadsworth Street, Apt. 22E
Cambridge, MA 02142
(Residence)

U. S. A.
(Citizenship)

Same as Residence
(Post Office Address)

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Applicant or Patentee: Joannopoulos, et al
Serial or Patent No.: _____
Filed or Issued: _____
For: "High Omnidirectional Reflector"

Attorney's Docket No.: MIT 7953

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(d)) - NONPROFIT ORGANIZATION**

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: Massachusetts Institute of Technology
ADDRESS OF ORGANIZATION: 77 Massachusetts Avenue
Cambridge, MA 02139

TYPE OF ORGANIZATION

- ☒ UNIVERSITY OR OTHER INSTITUTION OF HIGHER EDUCATION
- ☐ TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE
(26 USC 501(a) and 501(c) (3))
- ☐ NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE OF
STATE OF THE UNITED STATES OF AMERICA
(NAME OF STATE _____)
(CITATION OF STATUTE _____)
- ☐ WOULD QUALIFY AS TAX EXEMPT UNDER INTERNAL REVENUE
SERVICE CODE (26 USC 501(a) and 501(c) (3)) IF LOCATED IN THE
UNITED STATE OF AMERICA
- ☐ WOULD QUALIFY AS NONPROFIT SCIENTIFIC OR EDUCATIONAL
UNDER STATUTE OF STATE OF THE UNITED STATES OF AMERICA
IF LOCATED IN THE UNITED STATES OF AMERICA
(NAME OF STATE _____)
(CITATION OF STATUTE _____)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled "High Omnidirectional Reflector" by inventor(s) Joannopoulos, et al described in

- ☒ the specification filed herewith.
- ☐ application serial no. , filed .
- ☐ patent no. , issued .

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR 1.9 (c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____

ADDRESS _____

()INDIVIDUAL ()SMALL BUSINESS CONCERN ()NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

()INDIVIDUAL ()SMALL BUSINESS CONCERN ()NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING

Jarmila Z. Hrbek

TITLE IN ORGANIZATION

Patent Administrator and Office Manager,
Technology Licensing Office

ADDRESS OF PERSON SIGNING

77 Massachusetts Avenue, Room NE25-230
Cambridge, MA 02139

SIGNATURE

Jarmila Z. Hrbek

DATE

2/19/99

SCAN 9

RECORDATION FORM COVER SHEET PATENTS ONLY

HONORABLE COMMISSIONER OF
PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR:

PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENT(S) OR COPY(IES) THEREOF.

DC869, U.S. PTO
09/634099
08/08/00

1. NAME OF CONVEYING PARTY(IES)

John D. Joannopoulos
Shanhui Fan
Joshua N. Winn
Yoel Fink

Additional name(s) of conveying party(ies) attached? No

2. NAME(S) AND ADDRESS(ES) OF RECEIVING PARTY(IES)

Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Additional name(s) of receiving party(ies) attached? No

3. NATURE OF CONVEYANCE

☒ Assignment
☐ Security Agreement
☐ Merger
☐ Change of Name
☐ Other

Execution Date:

05/05/99

4. APPLICATION NUMBER(S) OR PATENT NUMBER(S)

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No(s): 09/253,379

B. Patent No(s): _____

Additional numbers attached? No

5. NAME AND ADDRESS OF PARTY TO WHOM CORRESPONDENCE CONCERNING DOCUMENT SHOULD BE DIRECTED:

Matthew E. Connors
Samuels, Gauthier, Stevens & Reppert
225 Franklin Street
Boston, Massachusetts 02110
(617) 426-9180, Extension 112

6. TOTAL NUMBER OF APPLICATIONS AND PATENTS INVOLVED: 1

7. TOTAL FEE DUE: \$40.00 (Enclosed)

If any additional fee(s) are due, the Commissioner is hereby
authorized to charge the Deposit Order Account noted in item 8.

8. DEPOSIT ACCOUNT NUMBER: 19-0079

9. STATEMENT AND SIGNATURE

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy
of the original document.

Matthew E. Connors
Name of Person Signing

Matthew E. Connors
Signature

5/10/99
Date

Total number of pages including cover sheet, attachments, and document: 5

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being
deposited with the United States Postal Service on the date shown below with sufficient postage as first
class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C.
20231.

Deborah M. Costello

Deborah M. Costello

Date: 5-10-99

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited on the date shown below in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number EM US addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.



Deborah M. Costello

Date: 5-10-99

ASSIGNMENT

Know all men by these presents that:

WHEREAS we, John D. Joannopoulos
64 Douglas Road
Belmont, MA 02178

and

Shanhui Fan
50 Porter Street
Somerville, MA 02143

and

Joshua N. Winn
16 Josephine Avenue #2
Somerville, MA 02144

and

Yoel Fink
60 Wadsworth Street, Apt. 22E
Cambridge, MA 02142

have made an invention for

HIGH OMNIDIRECTIONAL REFLECTOR

described in the application filed with the United States Patent and Trademark Office on February 19, 1999, as Serial No. 09/253,379, which claims priority from United States Provisional Patent Application Serial No. 60/075,223, filed February 19, 1998; and

WHEREAS Massachusetts Institute of Technology a corporation duly organized and existing under the laws of Massachusetts and having a place of business at 77 Massachusetts Avenue, Cambridge, MA 02139, for the benefit of itself, its successors and assigns, all inclusively hereinafter referred to as the Assignee, is desirous of acquiring the entire right, title and interest in and to the said invention, the said application, all inventions disclosed in said application and any and all Letters Patent of the United States and of all other countries which may be granted for the said invention or inventions, or any of them;

NOW, THEREFORE, for good and valuable consideration provided by said Assignee, the receipt whereof is hereby acknowledged, we do hereby sell, assign and transfer to the said Assignee the entire right, title and interest in and to the said invention, inventions and application, including all priority rights arising therefrom, all inventions disclosed in said application, and any and all Letters Patent of the United States, and of all other countries, together with the right to apply for such Letters Patent, which may be granted for the said invention, inventions or any of them,

TO HAVE, HOLD AND ENJOY the said invention, the said application, and the said Letters Patent, to said

Massachusetts Institute of Technology

its successors and assigns, to its and their own use and behoof to the full end of the term or terms for which the said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

AND we hereby authorize and request the Commissioner of Patents of the United States and the appropriate officers of all foreign patent offices to issue any and all Letters Patent which may be granted on the said application or applications above referred to, or for the said invention, or any of them, to the said Assignee in accordance with the terms of this instrument.

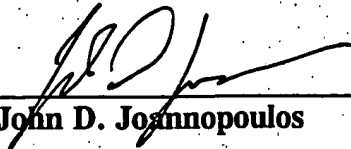
AND we hereby agree to execute and sign without further consideration any other legal document and any other assignments and any divisional, continuing, renewal, reissue or other application in and for all patents that may be appropriate and may be deemed necessary by the Assignee fully to secure to said Assignee its interests as aforesaid in and to the said invention or any part thereof and in and to the said patents or any of them.

AND we further covenant and agree that we will at any time upon request communicate to the said Assignee, its successors, assigns or other legal representatives, any facts known to us relating to the said invention and any patent that may be granted thereon, and will testify as to the same in any interference or litigation when requested to do so.

AND we hereby covenant for ourselves and our legal representatives that we have not hitherto assigned or granted any license to make, use or sell said invention, and that we will not henceforth purport to assign, license or execute any instrument to that effect in conflict with this assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on the dates below.

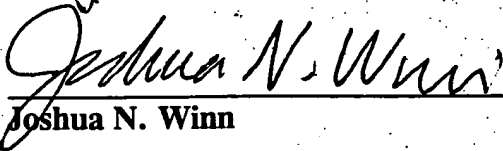
5 May 99
Date


John D. Joannopoulos

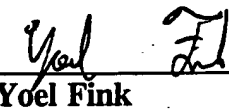
5 May 99
Date


Shanhui Fan

5 May 99
Date


Joshua N. Winn

5/5/99
Date


Yoel Fink